User Guide

PB1000 Battery Backup for SURFboard® VoIP Cable Modems

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Safety Information

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. THE UNIT MUST NOT BE EXPOSED TO DRIPPING OR SPLASHING. DO NOT PLACE OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, ON THE UNIT.
CAUTION: THIS PRODUCT WAS QUALIFIED UNDER TEST CONDITIONS THAT INCLUDED THE USE OF THE SUPPLIED CABLES BETWEEN SYSTEMS COMPONENTS. TO ENSURE REGULATORY AND SAFETY COMPLIANCE, USE ONLY THE PROVIDED POWER CABLE AND INSTALL IT PROPERLY.
CAUTION: DIFFERENT TYPES OF CORD SETS MAY BE USED FOR CONNECTIONS TO THE MAIN SUPPLY CIRCUIT. USE ONLY A MAIN LINE CORD THAT COMPLIES WITH ALL APPLICABLE PRODUCT SAFETY REQUIREMENTS OF THE COUNTRY OF USE.
CAUTION: INSTALLATION OF THIS PRODUCT MUST BE IN ACCORDANCE WITH NATIONAL WIRING CODES AND CONFORM TO LOCAL REGULATIONS.
CAUTION: DO NOT OPEN THE UNIT. DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE INSTALLATION AND TROUBLESHOOTING INSTRUCTIONS. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.
CAUTION: CHANGES AND MODIFICATIONS NOT EXPRESSLY APPROVED BY MOTOROLA FOR COMPLIANCE COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.
When using this device, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Read all of the instructions listed here and/or in the user manual before you operate this equipment. Give particular attention to all safety precautions. Retain the instructions for future reference.
- This device must be installed and used in strict accordance with manufacturer's instructions as described in the user documentation that comes with the product.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this equipment.
- Do not use this product near water for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords where they are attached to plugs and convenience receptacles, and examine the point where they exit from the product.
- Place this equipment in a location that is close enough to an electrical outlet to accommodate the length of the power cord.
- Place unit to allow for easy access when disconnecting the power cord of the device from the AC wall outlet.
- Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.
- Place this equipment on a stable surface.
- Postpone installation until there is no risk of thunderstorm or lightning activity in the area.
- *Avoid using this product during an electrical storm.* There may be a risk of electric shock from lightning. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet, and disconnect the cable system. This will prevent damage to the product due to lightning and power surges.
- It is recommended that the customer install an AC surge protector in the AC outlet to which this device is connected. This is to avoid damaging the equipment by local lightning strikes and other electrical surges.
- Do not cover the device, or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.

- Wipe the unit with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.
- Operate this product only from the type of power source indicated on the product's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- To prevent injuries or burns, do not allow metal objects to contact or short-circuit the battery terminals.
- Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in safe operating condition.

Safety Requirements for the PB1000 Lithium-Ion Battery

You must properly handle the PB1000 lithium-ion rechargeable battery to ensure your safety. Improper handling can cause leakage, heat, smoke, explosion, or fire resulting in damage to the equipment or the user.

- Use the PB1000 battery only in the PB1000 Battery Backup charger.
- CAUTION: Risk of explosion if battery is replaced by the incorrect type. Use only Motorola approved batteries; Motorola P/N 515757-001.
- Do not use the battery where static electricity is generated.
- Do not heat the battery or discard into a fire. Keep the battery away from high-temperature locations.
- Properly discard the battery if it exhibits an abnormal condition, such as heat, odor, color, or a change in shape. When discarding, place insulated tape over the battery terminals.
- The battery should be stored out of the reach of children.
- Do not store the battery close to metal objects.
- If the battery leaks fluid and you touch it, immediately wash your hands. If the fluid gets into your eye, do not rub the eye. Rinse with water and immediately seek medical care. Left untreated, the battery fluid could cause damage to the eye.
- Ensure that the battery does not receive any strong impacts, such as dropping or striking with a hard object.
- At the end of battery life, the PB1000 battery must be disposed of properly and may need to be recycled. Contact your local recycling center for proper disposal methods.
- Do not expose the battery to ultrasonic energy.
- Do not disassemble, modify, or attempt to repair the battery.
- Before installation, batteries should not be subjected to temperatures below -10ºC or above +60ºC (14º F to 140º F). After initial customer usage (initially charged above shipping charge state), batteries should not be subjected to temperatures outside the operating temperature range:
  Battery Pack External Exposure Operating Temperature Range:
  Charging: 0.0°C to +45.0°C (0º F to 113º F)
  Discharging: -10.0°C to +60.0°C (14º F to 140º F)
- SAVE THESE INSTRUCTIONS.

Regulatory Information

FCC Compliance Class B Digital Device

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada - Industry Canada (IC)

This Class B digital device complies with Canadian ICES-003.Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC Declaration of Conformity

According to 47CFR, Parts 2 and 15 for Class B Personal Computers and Peripherals; and/or CPU Boards and Power Supplies used with Class B Personal Computers, Motorola, Inc. Connected Home Solutions Business, 101 Tournament Drive, Horsham, PA 19044, 1-215-323-1000, declares under sole responsibility that the product identifies with 47CFR Part 2 and 15 of the FCC Rules as a Class B digital device. Each product marketed is identical to the representative unit tested and found to be compliant with the standards. Records maintained continue to reflect the equipment being produced can be expected to be within the variation accepted, due to quantity production and testing on a statistical basis as required by 47CFR 2.909. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The above named party is responsible for ensuring that the equipment complies with the standards of 47CFR, Paragraph 15.101 to 15.109.

International Declaration of Conformity

We,

Motorola, Inc.
Connected Home Solutions Business
101 Tournament Drive
Horsham, PA, U.S.A.

declare under our sole responsibility that the

PB1000

to which the declaration relates is in conformity with one or more of the following standards:

EN55022 EN55024 EN60950
CISPR 22 CISPR 24
IEC 60950 3rd Edition

the following provisions of the Directive(s) of the Council of the European Union:

EMC Directive 89/336/EEC
Low Voltage Directive 73/23/EEC
Directive 93/68/EEC

Introduction

The PB1000 Battery Backup provides standby power for the SBV4200 or SBV5120 Voice over IP (VoIP) cable modem if the customer temporarily loses power at their location. It ensures that the customer does not lose telephone service during a power outage for up to eight hours. Features of the PB1000 include:

- Reliable, long-life lithium-ion battery technology
- Provides up to eight-hour standby or up to six-hour talk time.
- No tools are required when battery replacement is required.
- Light Emitting Diodes (LEDs) indicate the status of the PB1000 battery.
- The Internet service provider (ISP) can remotely monitor the battery status.
- Additional PB1000 replacement batteries are available.
- The battery is maintained at full charge by special circuitry in the PB1000.

Note: When the PB1000 is installed for the first time, or if a battery pack is replaced, or if the battery is fully discharged, the battery may take up to 12 hours to reach full charge.

PB1000 LEDs

Item	Label	Color	Condition	Description
1	**Replace Battery**	**Red**	**Off**	Normal condition indicating that the battery is in good condition.
			Steady On	Replace the battery.
2	**Battery**	**Amber**	**Steady On**	Normal condition indicating that AC power is present and the battery is in good condition.
			Flashes once per second	AC power is present and a battery-low condition exists. or AC power is not present and battery-low condition exists.
			Flashes 3 times per second	AC power is present and a bad battery condition exists.
			Off	AC power is not present and battery is in good condition.
			Off	AC power is not present and a bad battery condition exists.
3	**Power**	**Green**	**Steady On**	Normal condition indicating that AC power is present.
			Flashes once per second	AC power is not present and battery is in good or low condition.

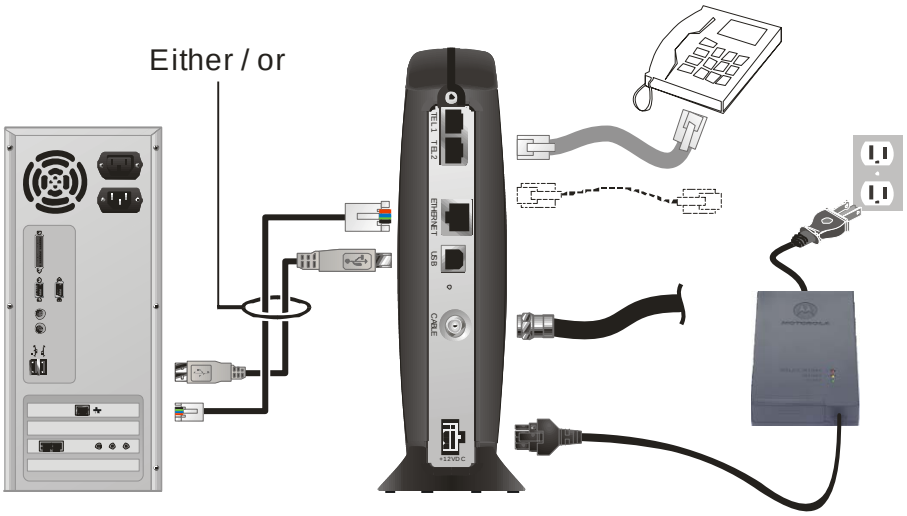
Note: A battery-low condition exists when PB1000 battery pack capacity is less than 20%.

Installing the PB1000 in an Existing VoIP Environment

Follow this procedure if the VoIP cable modem is already installed and VoIP phone service is operational.

1. Unplug AC power from the SBV4200 or SBV5120 VoIP cable modem by unplugging the AC cord from the AC wall outlet. *Do not reapply AC power until instructed to do so later in this procedure. It is not necessary to unplug anything else for an existing installation, such as the PC or telephone connections.*
2. Unplug the installed external power supply from the back of the VoIP cable modem and store it in a safe place.

Typical Connections



3 Remove the battery cover from the PB1000 Backup Battery supply by pushing on the *center locking tab* and sliding it up.

4 Slide the battery into the battery compartment until it is fully seated. It is keyed so that it cannot be installed incorrectly. Make sure that the *pull-tab* on the battery is accessible and does not prevent the battery cover from closing properly.

5 Re-install the battery cover with the locking tabs seated downward, and then push the cover forward.

Battery Installation

6 Plug the keyed power plug on the PB1000 into the back of the VoIP cable modem.

7 Plug the other power cord into the PB1000 and then into the AC wall outlet.

8 The LEDs on the PB1000 should turn on as described on the previous page.

9 Wait a few moments and then verify your connection to the Internet and your telephone by checking for dial-tone and making a test call.

This completes the installation of the PB1000.

Installing the PB1000 in a New VoIP Environment

If this is the initial installation of the VoIP cable modem, follow the steps below:

1 Install the VoIP cable modem according to the instructions in the *SBV4200 or SBV5120 User Guide* up to the point where AC power is connected.

2 Follow steps 4–10 found in “Installing the PB1000 in an Existing VoIP Environment.”

Limited Warranty

PB1000 Battery Backup for SURFboard® VoIP Cable Modems
Motorola, Inc., Connected Home Solutions Business ("Motorola")
What is my limited warranty? A limited warranty for this Product (including Software) is provided by Motorola to your distributor, cable operator or internet service provider, as applicable. Please contact your cable operator or internet service provider ("Service Provider") for details. Motorola does not warrant that any Software will perform error free or without bugs. Motorola's warranty shall not apply: (i) to any Product subjected to accident, misuse, neglect, alteration, Acts of God, improper handling, improper transport, improper storage, improper use or application, improper installation, improper testing or unauthorized repair; or (ii) to cosmetic problems or defects which result from normal wear and tear under ordinary use, and do not affect the performance or use of the Product. Motorola's warranty applies only to a Product that is manufactured by Motorola and identified by Motorola-owned trademarks, trade names or product identification logos affixed to the Product. MOTOROLA DOES NOT WARRANT THIS PRODUCT DIRECTLY TO YOU, THE END USER. EXCEPT AS DESCRIBED IN THIS SECTION "WARRANTY INFORMATION," THERE ARE NO WARRANTIES OR REPRESENTATIONS OF ANY KIND RELATING TO THE PRODUCT, EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY AGAINST INFRINGEMENT. MOTOROLA IS NOT RESPONSIBLE FOR, AND PROVIDES "AS IS" ANY SOFTWARE SUPPLIED BY 3RD PARTIES.

What additional provisions should I be aware of? Because it is impossible for Motorola to know the purposes for which you acquired this Product or the uses to which you will put this Product, you assume full responsibility for the selection of the Product for its installation and use. While every reasonable effort has been made to insure that you will receive a Product that you can use and enjoy, Motorola does not warrant that the functions of the Product will meet your requirements or that the operation of the Product will be uninterrupted or error-free. MOTOROLA IS NOT RESPONSIBLE FOR PROBLEMS OR DAMAGE CAUSED BY THE INTERACTION OF THE PRODUCT WITH ANY OTHER SOFTWARE OR HARDWARE.

How long does this Limited Warranty last? Contact your Service Provider for details.

What you must do to obtain warranty service. For Product customer service, technical support, warranty claims, questions about your internet service or connection, contact your Service Provider. ALL WARRANTIES ARE VOID IF THE PRODUCT IS OPENED, ALTERED, AND/OR DAMAGED.

THESE ARE YOUR SOLE AND EXCLUSIVE REMEDIES for any and all claims that you may have arising out of or in connection with this Product, whether made or suffered by you or another person and whether based in contract or tort.

IN NO EVENT SHALL MOTOROLA BE LIABLE TO YOU OR ANY OTHER PARTY FOR ANY DIRECT, INDIRECT, GENERAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF INFORMATION OR ANY OTHER PECUNIARY LOSS), OR FROM ANY BREACH OF WARRANTY, EVEN IF MOTOROLA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO CASE SHALL MOTOROLA'S LIABILITY EXCEED THE AMOUNT YOU PAID FOR THE PRODUCT.

Motorola's warranty is governed by the laws of the Commonwealth of Pennsylvania, excluding its conflict of laws principles and excluding the provisions of the United Nations.

Specifications

General

Dimensions	3.3 cm (1.2”) H x 9.5 cm (3.74”) W x 15.0 cm (5.9”) D
Output Power	15 Watts
Input Power	100 to 240 VAC, 50/60 Hz; 0.37 A
Battery Type	Lithium-ion
Battery Life Expectancy	3 to 5 years

Environmental

Operating Temperature	0° C to 40° C (32° F to 104° F)
Storage Temperature	-10ºC to +60ºC (14º F to 140º F)
Operating Humidity	5 to 95% R.H. (non-condensing)

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